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EXAMINER

LIU, HAN L

ART UNIT

PAPER NUMBER

3746

DATE MAILED: 08/27/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/049,690

Applicant(s)

TIEDEMANN ET AL.

Examiner

Han Lieh Liu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 June 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) 2 and 3 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,4,9,11 and 12 is/are rejected.
- 7) ☒ Claim(s) 5-8 and 10 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

1. Receipt is acknowledged of papers submitted for "Preliminary Amendment" on 02/15/2002. This amendment amends claim 1; cancels claims 2 and 3; and adds new claim 11 and 12. Amendment papers have been placed of record in the file. The amended claims are examined in this office action.

Priority

2. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. Germany 199 39 131.9, filed on 08/18/1999.

This application is a 371 of PCT/EP00/08084 filed on 08/18/2000.

Specification

The disclosure is objected to because of the following informalities:

3. The abstract of the disclosure is objected to because the abstract should be a single paragraph within the range of 50 to 150 words. Correction is required. See MPEP § 608.01(b).
4. In the Specification in page 1 line 14, "precharacteristizing clause of Claim 1" is recited. It is improper to refer to the claims in the Specification.

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5. “setting piston 44” and “positioning piston 44” have been used in the Specification, e.g., “setting piston” appears in page 9 line 12 and page 10 line 3 and “positioning piston” appears in page 9 lines 24 and 30. A consistent term should be used for same legend “44”.

Appropriate correction is required.

Claim Objections

6. Claim 4 is objected to because of the following informalities:

Claim 4 depends on cancelled claim 2. Therefore it is not clear whether claim 4 is an independent claim or it is a dependent claim to claim 1. This Office Action assumes that claim 4 is a dependent claim of base claim 1.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 4 – 9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 4 depends on a cancelled claim, claim 2. Its dependency is not clear. It is assumed claim 4 is a dependent claim of claim 1 in order to proceed the examination.

Claims 5 and 8 are dependent claims of claim 4 and claims 6 and 7 are dependent claims of claim 5. The line of dependency is not clear.

Claim 9 recites “according to one of the preceding claims” is not clear. Since claims 2 and 3 are cancelled and claims 4 – 8 are not certain of their dependency, dependency of multi-dependent claim 9 is not clear.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1 and 11 – 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Roberts (USPN 4037993).

With regard to claims 1 and 11, Roberts discloses an axial piston drive with a continuously adjustable piston stroke in Figure comprising, a drive shaft (18) on which a swash plate (C) is supported in a crank chamber (not labeled) in such a way as to be tiltable and displaceable in the axial direction, column 4 lines 13 – 23, and with a controller (control valve G with fluid actuator K) by means of which an tilt angle and an axial position of the swash plate (C) can be adjusted, column 5 line 60 – column 6 line 23, and with at least one piston (56) connected to the swash plate (C) so that it can be actuated to move within a cylinder (10), wherein the controller (control valve G) incorporates an adjustment unit (fluid actuator K) that is separated from the piston (56) and hydraulically driven, as shown in the Figure.

With regard to claims 9 and 12, Roberts discloses the invention as in base claim 1. Furthermore, Roberts discloses that the swash plate (C) is supported on a joint head (72) that can

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be axially displaced by means of a setting piston (162) of the adjustment unit (K), column 5 lines 32 – 37, and the swash plate (C) is connected by an off-center joint (106, 100) to a component (D and H) that is fixed in the axial direction, column 4 lines 44 – 59.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Roberts (USPN 4037993) as applied to claim 1 above, and further in view of Abendschein et al. (USPN 4073603).

Roberts discloses the invention substantially as claimed in base claim 1. Roberts, however, does not specifically disclose using an oil separator in the hydraulic system. Abendschein et al. disclose the use of an oil separator (162), Figs. 1 and 6, disposed downstream of the cylinder (10), column 6 lines 1 – 12. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to advantageously employ an oil separator in the hydraulic loop to recover and separate the lubricant oil from the fuel for reuse.

Allowable Subject Matter

10. Claims 5 – 8 and 10 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Alme et al. (USPN 5226349), Goto et al. (USPN 5295796), Roberts (USPN 4475871), Olson, Jr. (USPN 3552886), Loomis, III (USPN 2964234).

Alme et al. disclose a variable displacement axial piston pump of the type including a displacement cam member to vary the pump displacement in response to operation of a fluid pressure actuated servo assembly. The servo assembly includes a servo piston, the portion of which is controlled in response to control fluid in a pair of servo chambers. The flow of control fluid pressure from a charge pump to the servo chambers is controlled by a manual controller, which includes a main control orifice.

Goto et al. discloses a variable displacement hydraulic piston pump having a hydraulic control cylinder capable of providing the swash plate with a controlled force moving the swash plate toward a large inclination angle position.

Roberts discloses an axial piston, variable displacement, wobble plate compressor having wobble plate control for rapid response to a compressor inoperative mode. A mechanical or spring means serves to maintain the reference position during in-operation of the compressor.

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Olson, Jr. discloses a compressor unit with self-contained drive means and oil separator means to separate and drain the lubricant oil to the suction chamber.

Looms, III. discloses a variable displacement compressor with a means for balancing and for adjusting capacity. An independent piston and cylinder is provided to control the inclination of the swash plate.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Han Lieh Liu whose telephone number is 703-305-0860. The examiner can normally be reached on Monday - Thursday 7:30 to 16:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy S. Thorpe can be reached on 703-308-0102. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 308-0861.


Han Lieh Liu